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IDENTIFICATION SYSTEM AND CHARACTERISTICS OF REICHSBAHN LOCOMOTIVES

[Comment: The textual information in this report was extracted from the book Die Dampflokomotiven Der Deutschen Reichsbahn (Steam Locomotives of the GDR Reichsbahn), by Hans Wendler, and the table from an enclosure to CSDB 15437, entitled, Verfuegungen und Mitteilungen des Ministeriums fuer Eisenbahnen (Directives and Announcements of the Ministry of Railroads), published on 26 October 1953 in Berlin.]

Reichsbahn locomotives are numbered and identified by various methods, including an abbreviated axle arrangement and cylinder description, a numerical identification of the construction series, and a type identification by locomotive use, number of wheel pairs, and axle pressure.

One of the methods employed by the Reichsbahn is the German or Continental System. In this system, capital letters, A, B, C, D, etc., are used to denote the number of pairs of coupled wheels or driving axles, while the numerals, 1, 2, 3, 4, etc., are used to denote the number of leading or trailing axles. This system does not use 0 (zero) to indicate the absence of leading or trailing axles. The numerals and the letters are followed by an apostrophe if the axle (or axles) is (are) housed in trucks. If more than one truck (in one group) must be identified, then the appropriate symbols are put in parentheses and the apostrophe is omitted.

[The Whyte System, commonly used in the US to designate steam locomotives, uses Arabic numerals to represent the number of wheels in each group, starting at the front end of the locomotive.

Thus, to convert from the German System to the Whyte System, simply double the numerals (axles into wheels), convert the letter into the corresponding number (A to 1; B to 2; C to 3; etc.) and double that number, as shown in the following example:

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Whyte System

4 - 6 - 2
0 - 8 - 0
0 - 4 - 4 - 0

German System

2'-C-1
D
1 C+C 1

AAR System
(see below)

2 C 1
D
2 (1 C)

Under the German System, if several driving axles which are not coupled together follow each other, then the axles are identified by the same capital letter which would be used if they were coupled. However, in this case, the letter is followed by a lower-case c. [This system is used generally, with some modification, in the US to identify electric locomotives. The system, called the AAR (Association of American Railroads) Standard System, identifies the driving axles by capital letters, the idle axles by numerals, and uses the plus and minus signs to identify the various connections.]

In addition to identifying the axle arrangement, the German System adds two to three symbols to identify the type of steam used, the number of cylinders of the locomotives, and whether or not the locomotive is a compound locomotive. The letters h and n identify the type of steam and follow the last numeral or letter of the axle arrangement. The h denotes superheated steam, and the n denotes saturated steam. This letter is followed by a numeral denoting the number of cylinders of the locomotive. If the locomotive is a compound locomotive, then the last symbol in the German System is a v, as shown in the following example:

German System

2'C 1' h 4 v

Whyte System

4-6-2 superheated, four-cylinder compound locomotive

Reichsbahn locomotives are further identified by a locomotive type designation. This designation consists of a letter denoting the type of locomotive, namely, S [fast express train locomotive], P [local passenger train locomotive], G [freight train locomotive], St [fast express train tank locomotive], Pt [local passenger train tank locomotive] Gt [freight train tank locomotive] L [local railroad line locomotive] and K [narrow-gauge locomotive] and a four-digit number. The first digit represents the number of coupled or individual driving-wheel pairs of the locomotive, the second digit represents the total number of wheel pairs of the locomotive, and the third and fourth digits represent the average axle pressure in tons. For example, P 35.17 is a local passenger train locomotive with three coupled or individual driving wheel pairs for a total of five wheel pairs and with an average axle pressure of 17 tons.

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The construction series number, as shown above, identifies the axle arrangement and the type of frame of the locomotive.

Reichsbahn locomotive tenders are described by the German system (same as for locomotives), followed by a T and a numeral denoting the cubic-meter water capacity of the tender, as shown in the following example, where 3 T 20 is a three-axle tender (axles housed in main frame) with 20-cubic-meter water capacity, and 2'2 T 16 is a tender with a two-axle truck, two axles in the main frame, and a 16-cubic-meter water capacity.

[Table appears on following pages.]

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Characteristics of Reichsbahn Locomotives

Axe Arrangement	Locomotive Group No.	Construction Series no (Type of Frame)	Peculiarities	Locomotive Type	Dead weight (kg)	Type of Tender	Dead weight of Tender (kg)	Total weight (kg)	Replace- ment cost (DM)
2'C 1'h 2	01;	—	Short boiler	S 36.20	99,300	2'2'T 32	32,600	131,900	427,356
2'C 1'h 3	01.10	—	Long boiler	S 36.20	99,900	—	—	—	—
2'C 1'h 2	03	—	(001-122 [serial number])	S 36.17	90,400	2'2'T 32	32,600	132,500	429,300
—	—	From 123 on	—	S 36.18	91,000	—	—	—	—
2'C 1'h 3	03	—	—	S 36.18	93,800	—	—	—	—
2'C h 4 v	17	17-10-12	—	S 35.17	75,700	2'2'T 31.5	26,400	102,100	330,804
2'C 1'h 3	18	18 ⁰	—	S 36.17	84,400	2'2'T 31	24,400	108,800	352,512
—	18 ³	—	—	S 36.17	87,500	2'2'T 29.6	24,600	112,100	363,204
1'D 1'h 4 v	19	19 ⁰	—	S 46.17	90,300	2'2'T 31	24,400	114,700	371,628
1'C'h 2	23	—	—	P 35.18	80,140	2'2'T 26	25,500	105,640	323,258.40
1'C'h 2	24	—	—	P 34.15	52,000	3 T 16	21,300	73,300	224,298
—	36	36-0-5	—	P 24.15	45,000	2'2'T 16	22,000	67,000	205,020
2'C h 2	36	38 ²⁻³	—	P 35.15	65,600	2'2'T 21.5	23,000	88,600	271,116
2'C h 2	38	38 ¹⁰⁻⁴⁰	—	P 35.17	70,000	2'2'T 21.5	23,000	93,700	286,722
1'D 1'h 3	39	39 ⁰⁻²	—	P 46.19	100,400	2'2'T 31.5	26,000	127,000	388,620

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1'D 1'h 2	41	--	--	G 46.16/20	92,600	2'2'T 34	30,200	122,800	365,944
1'E h 2	42	--	--	G 56.17	86,800	K2'2'T 30	18,460	105,260	313,674.80
1'E h 2	43	--	--	G 56.20	100,900	2'2'T 34	30,200	131,100	390,678
1'E h 3	44	--	013-065	G 56.20	99,900	2'2'T 32	32,600	132,500	406,174
			From 066 on	G 56.20	103,700	2'2'T 32	32,600	136,300	410,644
1'E 1'h 3	45			G 57.20/18	114,700				
		Average pressure	0.12	G 56.20	105,200	2'2'T 32	32,600	137,800	411,154
1'E h 2	50	--	--	G 56.15	76,600	2'2'T 26	25,500	104,000	310,218
1'E h 2	52	--	--	G 56.15	78,000	K2'2'T 30	18,600	96,600	287,368
1'E h 2	52	--	--	G 56.15	77,200	K2'2'T 30	18,600	95,800	285,484
1'E h 2	52 K	Condenser	--	G 56.16	81,180	K2'2'T 16	47,030	128,210	382,065.80
--	53	53 ⁷²	--	G 33.14	37,500	3 T 12	16,900	54,400	162,112
1'C h 2 v	54	54 ⁸⁻¹¹	--	G 34.14	50,900	3 T 15	16,300	67,200	200,256
--				G 34.16	56,200	3 T 18.2	19,400	75,600	225,288
D h 2	55	55 ⁰⁻⁶	--	G 44.13	47,700	3 T 12	16,900	64,600	192,508
D h 2		55 ¹⁶⁻²²	--	G 44.14	52,000	3 T 15.6	22,000	74,000	220,520
D h 2		55 ²³⁻²⁴	--	G 44.16	58,000	3 T 12	16,900	74,900	223,202
D h 2		55 ²⁵⁻²⁶	--	G 44.17	62,200	3 T 16.5	22,000	84,200	250,916

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D h 2	55 ⁵⁸	--	G 44.17	61,400	3 T 16.5	22,000	33,160	246,530	
1'D h 3	56	56 ¹	--	G 45.17	76,700	3 T 20	19,600	96,300	286,974
1'D h 2	56 ²⁻⁹	--	G 45.16	68,900	3 T 16.5	22,000	90,900	270,882	
1' D h 3	56 ²⁰⁻³⁰	--	G 45.17	76,200	3 T 20	19,600	95,800	285,484	
E h 2	57	57 ¹⁰⁻⁴⁰	--	G 55.15	69,600	3 T 16.5	22,000	91,600	272,968
1'E h 3	58	58 ⁰	--	G 56.17	86,700	2'2' T 21.5	-3,000	109,700	326,906
1'E h 3	58 ^{2-3,4,10-21}	--	G 56.16	85,400	3 T 20	19,600	105,000	312,900	
--	58 ⁵	--	G 56.16	85,200	3 T 20	19,600	104,800	312,304	
--	59	--	St 24.18	55,500	--	--	55,500	174,825	
2'C 2'h 2	61	--	001	St 37.18	100,500	--	--	100,500	316,575
2'C 2'h 3	--	--	From 002 on	St 38.18	112,900	--	--	112,900	355,635
2'C 2'h 2	62	--	--	Pt 37.20	97,900	--	--	97,900	308,385
1'C 1'h.2	64	--	001-5.10	Pt 35.15	58,000	--	--	58,000	182,700
1'C 1'h 2	--	--	From 511 on	Pt 35.15	58,500	--	--	58,500	184,275
--	70	--	--	Pt 23.13	29,900	--	--	29,900	94,185
--	72	72 ¹	--	Pt 23.14	31,000	--	--	31,000	97,650
1'C n 2	74	74 ⁰⁻³	--	Pt 34.16	15,200	--	--	48,200	151,230
1'C n 2	74	74 ¹⁻¹³	Superheater	Pt 34.16	19,600	--	--	49,600	156,240
1'C n 2	74	74 ¹⁻¹³	Pt 34.17	53,200	--	--	53,200	167,580	
--	75	75 ¹	Vlb 1-5	Pt 35.14	52,100	--	--	52,100	164,115

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--	75 ¹⁻²	Vlb 6-7	Pt 35.14	51,600	--	--	51,600	162,440	
--	75 ²	Vlb 8-9	Pt 35.14	50,800	--	--	50,800	160,020	
--	75 ²⁻³	Vlb 10-11	Pt 35.14	51,200	--	--	51,200	163,170	
--	75 ⁴		Pt 35.16	59,100	--	--	59,100	186,165	
1'C 1'h 2	75 ⁵	501-510	Pt 35.16	62,700	--	--	62,700	197,505	
1'C 1'h 2	75 ⁵	511-550	Pt 35.16	60,100	--	--	60,100	189,315	
1'C 1'h 2	75 ⁵	From 511 on	Pt 35.16	64,200	--	--	64,200	202,230	
--	75 ¹⁰⁻¹¹	--	Pt 35.17	61,300	--	--	61,300	193,095	
--	77	77 ¹	--	Pt 36.16	71,300	--	71,300	224,595	
2'C 2'h 2	78	78 ⁰⁻⁵	--	Pt 37.17	83,200	--	83,200	262,080	
C h 2	80	--	--	Gt 35.17	44,300	--	44,300	132,014	
D h 2	81	--	--	Gt 44.17	52,000	--	52,000	--	
1'E 1'h 3	84	--	001/002 and from 005 on	Gt 57.18	100,500	--	--	100,500	299,490
			003/004	Gt 57.18	100,900	--	--	100,900	300,682
1'E 1'h 3	85	--	--	Gt 57.20	107,500	--	--	107,500	--
1'D 1'h 2	86	001	Gt 46.15	70,000	--	--	70,000	208,600	
		293-296	Gt 46.15	68,000	--	--	70,000	--	

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C n 2	89 ¹	89 ¹	From 336 on	Gt 46.15	68,000	--	--	68,000	202,640
C n 2	89 ²	89 ²	--	Gt 33.15	36,200	--	--	36,200	107,876
C n 2	89 ²	201-280	Gt 33.14	33,100	--	--	--	33,100	98,638
C n 2	281-284	281-284	Gt 33.16	38,300	--	--	--	38,300	114,134
89 ⁶	--	--	Gt 33.15	35,500	--	--	--	35,500	105,790
89 ⁶⁰	--	--	Gt 33.10	30,700	--	--	--	30,700	91,486
89 ⁶¹	--	--	Gt 33.11	26,000	--	--	--	26,000	77,480
89 ⁶²	--	--	Gt 33.12	27,300	--	--	--	27,300	81,354
89 ⁶³	--	--	Gt 33.13	27,300	--	--	--	27,300	81,354
89 ⁶⁴	--	--	Gt 33.14	33,100	--	--	--	33,100	98,638
89 ⁶⁵	--	--	Gt 33.15	35,500	--	--	--	35,500	105,790
89 ⁶⁶	--	--	Gt 33.15	35,500	--	--	--	35,500	105,790
89 ⁶⁶	--	--	Gt 33.16	37,600	--	--	--	37,600	112,048
89 ⁷⁰⁻⁷⁵	--	--	Gt 33.12	27,300	--	--	--	27,300	81,354
89 ⁸⁰	--	--	Gt 33.11	26,000	--	--	--	26,000	77,480
90	--	--	Gt 33.14	41,520	--	--	--	41,520	123,729.60
91 ²	91 ¹	91 ²	Gt 34.13	39,400	--	--	--	39,400	117,412
91 ³⁻¹⁸	--	--	Gt 34.15	46,500	--	--	--	46,500	138,570
91 ¹⁹	--	--	Gt 34.12	37,000	--	--	--	37,000	110,260

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91 ⁶¹	--	Gt 34.11	46,500	--	--	46,500	138,570
91 ⁶²	--	Gt 34.12	37,000	--	--	37,000	110,260
91 ⁶³	--	Gt 34.13	39,400	--	--	39,400	117,412
91 ⁶⁵	--	Gt 34.15	46,500	--	--	46,500	136,570
91 ²	--	Gt 44.14	43,500	--	--	43,500	129,630
92 ²⁻³	--	Gt 44.15	44,000	--	--	44,000	131,120
92 ⁴	--	Gt 44.16	53,200	--	--	53,200	158,536
D n 2	92 ⁵⁻¹¹	--	Gt 44.15	46,000	--	46,000	137,080
--	92 ²⁰	Fron 241 on	Gt 44.17	53,600	--	53,800	160,324
92 ⁶⁰	--	Gt 44.10	35,000	--	--	35,000	104,300
92 ⁶¹	--	Gt 44.11	35,000	--	--	35,000	104,300
92 ⁶²	--	Gt 44.12	38,000	--	--	38,000	113,240
92 ⁶³	--	Gt 44.13	45,000	--	--	45,000	134,100
92 ⁶⁴	--	Gt 44.14	43,500	--	--	43,500	129,630
92 ⁶⁵	--	Gt 44.15	46,000	--	--	46,000	137,080
92 ⁶⁶	--	Gt 44.16	53,200	--	--	53,200	158,536
92 ⁶⁷	--	Gt 44.17	60,000	--	--	60,000	178,800
92 ⁶⁸	--	Gt 44.18	59,800	--	--	59,800	178,204
1'D 1'h 2	93 ⁰⁻⁴	--	Gt 46.16	76,700	--	76,700	228,566

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1'D 1'h 2	93 ⁵⁻¹²	--	Gt 46.17	CO,1CC	--	--	23,100	238,698
	93 ⁶¹	--	Gt 46.14	57,400	--	--	57,400	171,052
	93 ⁶⁵	--	Gt 46.15	65,000	--	--	65,000	193,700
	93 ⁶⁶	--	Gt 46.16	76,700	--	--	76,700	228,266
	93 ⁶⁷	--	Gt 46.17	82,500	--	--	82,500	245,850
	94 ¹	--	Gt 55.13	48,300	--	--	48,300	143,934
E h 2	94 ²⁻⁴	--	Gt 55.15	53,200	--	--	60,200	179,396
E h 2	94 ⁵⁻¹⁸	--	Gt 55.17	68,100	--	--	68,100	202,938
E h 2	94 ²⁰⁻²¹	--	Gt 55.16	61,700	--	--	61,700	183,866
	95 ⁰	--	Gt 57.19	103,700	--	--	103,700	309,026
	95 ⁶⁶	--	Gt 57.16	85,000	--	--	85,000	253,300
	96 ⁰	--	Gt 88.15	99,400	--	--	99,400	296,212
	96 ⁰	--	Gt 88.16	105,400	--	--	105,400	314,092
	98 ⁰	--	L 44.15	49,1CC	--	--	49,400	118,560
	98 ¹	--	L 22.14	21,000	--	--	21,000	50,400
	98 ³	--	L 44.11	35,400	--	--	35,400	84,960
	98 ⁸	--	L 44.12	26,800	--	--	36,800	88,320
	98 ¹¹	--	L 45.11	35,500	--	--	40,500	97,200
	98 ⁶⁰	--	L 22.10	18,000	--	--	18,000	43,200

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9861	--	L 22.11	19,000	--	--	19,000	45,600
9862	--	L 22.12	20,000	--	--	20,000	46,000
9863	--	L 45.13	45,000	--	--	45,000	108,000
9907	71/72	K 36.6	14,700	--	--	14,700	41,160
9916	161/62	K 44.10	33,100	--	--	33,100	92,680
9918	183	K 55.6	28,500	--	--	28,500	79,800
9919	191	K 55.9	33,600	--	--	33,600	94,080
9922	222	K 57.10	50,200	--	--	50,200	140,560
9931	311/13	K 44.8	25,450	--	--	25,450	71,260
9932	321/23	K 46.8	43,696	--	--	43,696	122,348.80
9951-55	516/57	K 44.7	21,700	--	--	21,700	60,760
9956-60	560/609	K 44.7/8	22,400	--	--	22,400	62,720
9964-65	640/59	K 55	30,400	--	--	30,400	85,120
9967-72	670/729	K 55.9	32,500	--	--	32,500	91,000
9973-76	730/69	K 57.9	44,300	--	--	44,300	124,040
9979	791	K 35.7	16,700	--	--	16,700	46,760

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